



PATENT ATTORNEY DOCKET NO. VOSS1130

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Serial No.: Peltonen, et al.

09/509,595

Art Unit:

1645

Examiner

Not Assigned

Filed:

March 28, 2000

Title:

NUCLEIC ACID MOLECULE ENCODING A (POLY)PEPTIDE CO-

SEGREGATING IN MUTATED FORM WITH AUTOIMMUNE

POLYENDOCRINOPATHY CANDIDIASIS ECTODERMAL DYSTROPHY

(APECED)

Commissioner for Patents Office of Initial Patent Examination **Customer Service Center** Washington, D.C. 20231

TECH CENTER 1600/2900

TRANSMITTAL LETTER

Sir:

Transmitted herewith for filing in connection with the above-identified patent application, please find the following:

- Request for Corrected Filing Receipt; (1)
- Filing Receipt reflecting changes; **(2)**
- Copy of PCT Cover Sheet showing international filing date "October 2, 1998". (3)
- Copy of Response to Notification of Missing Requirements filed on September 5, **(4)** 2000.
- (5) Return postcard.

CERTIFICATION UNDER 37 CFR §1.8

I hereby certify that the documents referred to as enclosed herein are being deposited with the United States Postal Service as first class mail on this date, 10-20, 2000, in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231

linia M· Nasa (Name of Person mailing Paper)

10-20-00

(Signature of Person Mailing Paper)

Date

In re Application: Peltonen, et al. Application No.: 09/509,595

Filed: March 28, 2000

Page 2

PATENT Attorney Docket No. VOSS1130

No fee is deemed necessary in connection with the filing of this paper. However, if any fee is required, the Commissioner is hereby authorized to charge the amount of this fee, or credit any overpayments, to Deposit Account No. <u>50-1355</u>. A copy of this Transmittal Letter is enclosed.

Respectfully submitted,

Date: _____10/20/

Lisa A. Haile, Ph.D.

Registration No. 38,347 Telephone: (858) 677-1456 Facsimile: (858) 677-1465

GRAY CARY WARE & FREIDENRICH LLP 4365 Executive Drive, Suite 1600 San Diego, California 92121-2189





PATENT ATTORNEY DOCKET NO. VOSS1130

UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Serial No.: Peltonen, et al.

Art Unit: Examiner 1645

Not Assigned

Filed:

Title:

March 28, 2000

09/509,595

NUCLEIC ACID MOLECULE ENCODING A (POLY)PEPTIDE CO-

SEGREGATING IN MUTATED FORM WITH AUTOIMMUNE

POLYENDOCRINOPATHY CANDIDIASIS ECTODERMAL DYSTROPHY

(APECED)

Assistant Commissioner for Patents Office of Initial Patent Examination **Customer Service Center** Washington, D.C. 20231

REQUEST FOR CORRECTION OF FILING RECEIPT

Sir:

This Communication is submitted to request correction of the filing receipt in reference to the above-identified application. The data requiring correction is indicated in yellow highlight on the attached copy of the filing receipt and herein in BOLD.

CERTIFICATION UNDER 37 CFR §1.8

I hereby certify that the documents referred to as enclosed herein are being deposited with the United States Postal Service as first class mail on this date, 10-20, 2000, in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231

Person Mailing Paper)

10-20-∝ Date

In re Application: Peltonen, *et al.* Application No.: 09/509,595

Filed: March 28, 2000

Page 2

PATENT Attorney Docket No. VOSS1130

Please correct the following Filing Date of Application Serial No. 09/509,595 from July 5, 2000 to -September 5, 2000--.

Please correct the International Filing Date of PCT/EP98/06294 from March 28, 1998 to -- October 2, 1998 --.

Applicants accordingly request the correction be made of record.

No fee is deemed necessary in connection with the filing of this paper. However, if any fee is required, the Commissioner is hereby authorized to charge the amount of this fee, or credit any overpayments, to Deposit Account No. <u>50-1355</u>.

Respectfully submitted,

Date: 10/20/00

Lisa A. Haile, Ph.D.

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PATENT ATTORNEY DOCKET NO. VOSS1130

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:

Peltonen et al.

Art Unit:

Unassigned

Serial No.:

09/509,595

Examiner

Unassigned

Filed:

March 28, 2000

Title:

RECEIVED NOVEL NUCLEIC ACID MOLECULE ENCODING A (POLY)PEPTIDE CO-

SEGREGATING IN MUTATED FORM WITH AUTOIMMUNE

POLYENDOCRINOPATHY CANDIDIASIS DYSTROPHY (APECED)

BOX PCT

Assistant Commissioner of Patents Washington, D.C. 20231

CERTIFICATE OF MAILING BY "EXPRESS MAIL"

"EXPRESS MAIL" MAILING LABEL NO. EL476994339US DATE OF DEPOSIT September 5, 2000

 \underline{I} HEREBY CERTIFY THAT THIS PAPER OR FEE IS BEING DEPOSITED WITH THE UNITED STATES POSTAL SERVICE "EXPRESS MAIL POST OFFICE TO ADDRESSEE" SERVICE UNDER 37 C.F.R. 1.10 ON THE DATE INDICATED ABOVE AND IS ADDRESSED TO THE ASSISTANT COMMISSIONER FOR PATENTS, WASHINGTON, D.C. 20231.

MIKHAIL BAYLEY

(TYPED OR PRINTED NAME OF PERSON MAILING PAPER OR FEE)

RESPONSE TO NOTIFICATION OF MISSING REQUIREMENTS

Sir:

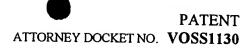
In response to the Notification of Missing Requirements Under 35 U.S.C. 371 in the United States Designated/Elected Office mailed June 5, 2000, enclosed are:

- A copy of the Notification of Missing Requirements; 1.
- 2. An executed Declaration for Patent Application (5 pages);
- A Power of Attorney by Assignee (Max-Planck-Gesellschaft zur Forderung der Wissenschaften e.V.; 2 pages);
- A Verified Statement (Declaration) Claiming Small Entity Status (Max-Planck-Gesellschaft zur Forderung der Wissenschaften e. V.; 1 page);

In re Application of: Peltonen et al.

Serial No.: 09/509,595 Filed: March 28, 2000

Page 2



5. A Petition for Extension of Time; and

6. Return Postcard.



A check in the amount of \$190.00 is enclosed to cover the two (2)-month extension fee. No other fee is believed to be due in connection with this filing. However, if there are any additional fees required by this filing, the Commissioner is authorized to charge such fees, or credit any overpayments, to Deposit Account No. 50-1355. A copy of the Transmittal Sheet is enclosed.

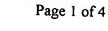
Respectfully submitted,

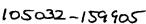
Date: 9/6/00

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United States Patent and Trademark Office

OCT 2 3 2000

(Y4)

COMMISSIONER FOR PATENTS TATES PATENT AND TRADEMARK OFFICE WASHINGTON, D.C. 20231

Date Mailed: 09/25/2000

www.uspto.gov APPLICATION NUMBER FILING DATE GRP ART UNIT FIL FEE REC'D ATTY.DOCKET.NO DRAWINGS TOT CLAIMS IND CLAIMS 09/509.595 07/05/2000 1645 1561 VOSS1130

FILING RECEIPT

OC000000005425090

Lisa A Haile Gray Cary Ware & Freidenrich **Suite 1600** 4365 Executive Drive San Diego, CA 92121

RECEIVED

OCT 0 3 2000

GRAYCARY/GT PATENT

Receipt is acknowledged of this nonprovisional Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please write to the Office of Initial Patent Examination's Customer Service Center. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the PTO processes the reply to the Notice, the PTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).

Applicant(s)

Leena Peltonen, Los Angeles, CA: Johanna Aaltonen, Helsinki, FINLAND; Petra Bjorses, Helsinki, FINLAND; Jaakko Perheentupa, Helsinki, FINLAND; Aamo Palotie, Los Angeles, CA: Nina Horelli-Kuitunen, Helsinki, FINLAND; Marie-Laure Yaspo, Berlin, GERMANY; Hans Lehrach, Berlin, GERMANY;

Continuing Data as Claimed by Applicant

THIS APPLICATION IS A 371 OF PCT/EP98/06294 03/28/1998

10-2-1998

Foreign Applications

GERMANY 97 11 7154.1 10/02/1997 GERMANY 97 11 7398.4 10/08/1997 GERMANY 97 11 9810.6 11/12/1997

If Required, Foreign Filing License Granted 09/25/2000

** SMALL ENTITY **

Title

Nucleic acid molecule encoding a (poly)peptide co-segregating in mutated form with autoimmune polyendocrinopathy candidiasis ectodermal dystrophy (apeced)

Preliminary Class

530

Data entry by : ORDENEZ, MARTA

OCT 2 3 2000 CCT 2 3 2000

Date: 09/25/2000

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WORLD INTELLECTUAL PROPERTY ORGANIZATION



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

nternational Patent Classification 6:

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97117154.1 97117398.4 97119810.6

2 October 1997 (02.10.97) EP 8 October 1997 (08.10.97)

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(74) Agent: VOSSIUS & PARTNER; Siebertstrasse 4, D-8167: München (DE).

(81) Designated States: CA, JP, US, European patent (AT, BE, CH

CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL

(項),Applicants (for all designated States except MAX-PLANCK-GESELLSCHAFT ZUR FÖRDERUNG DER WISSENSCHAFTEN E.V. [DE/DE]; Berlin (DE). NATIONAL PUBLIC HEALTH INSTITUTE [FI/FI]; Mannerheimintie 166, FIN-00300 Helsinki (FI).

Published

With international search report.

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1029 Westholme Avenue, Los Angeles, CA 90024 (US). HORELLI-KUITUNEN, Nina [FI/FI]; Lauri Mikon(88) Date of publication of the international search report: 24 June 1999 (24.06.99

(54) Title: NUCLEIC ACID MOLECULE ENCODING A (POLY)PEPTIDE CO-SEGREGATING IN MUTATED FORM WITH AUTOIMMUNE POLYENDOCRINOPATHY CANDIDIASIS ECTODERMAL DYSTROPHY (APECED)

(57) Abstract

The present invention relates to a nucleic acid molecule encoding a (poly)peptide co-segregating in mutated form with Autoimmune Polyendocrinopathy Candidiasis Ectodermal Dystrophy (APECED). In addition, the invention relates to a mammalian, preferably murine homologue of the above nucleic acid molecule. The present invention further relates to a nucleic acid molecule deviating by at least one mutation from the nucleic acid molecule described above wherein said mutation co-segregates with APECED and is an insertion, a deletion a substitution and/or an inversion, and wherein said mutation further results in a loss or a gain of function of the (poly)peptide encoded by said mutated nucleic acid molecule. Furthermore, the present invention relates to a vector comprising the nucleic acid molecules described above and to a host transformed with said vector. In addition, the present invention relates to a process of recombinantly producing a (poly)peptide encoded by the nucleic acid molecules described above comprising culturing or raising said host and isolating said (poly)peptide from said culture or said host. The present invention further relates to the (poly)peptide encoded by said nucleic acid molecules or produced by the process described above. Additionally, the present invention relates to an antibody that specifically recognizes said (poly)peptides. Moreover, the present invention relates to a method for testing for a carriership for APECED or for a corresponding disease state comprising testing a sample obtained from a prospective patient or from a person suspected of carrying a predisposition for a mutation in the wild-type nucleic acid molecule described above or a mutated form of the (poly)peptide encoded by said mutated nucleic acid molecule in an immuno-assay using the antibody described above.